CHAPTER 7

ASSESSMENT OF CEQA ALTERNATIVES AND POLICY OPTIONS

INTRODUCTION

The California Environmental Quality Act (CEQA) requires that the District propose alternatives to the Draft Final 2007 AQMP. These alternatives should include realistic measures to attain the basic objectives of the proposed project and provide the means for evaluating the comparative merits of each alternative. The range of alternatives must be sufficient to permit a reasonable choice but need not include every conceivable project alternative. The CEQA Alternatives to the Draft Final 2007 AQMP are CEQA Alternative 1 (No Project Alternative, which is the 2003 AQMP) and CEQA Alternative 2 (VOC/NOx Combined Alternative or Least Toxic Alternative). The Draft Socioeconomic Report herein evaluates those alternatives that meet attainment of the air quality standards. CEQA Alternative 1 falls short of attaining the standards; therefore, it is not analyzed herein.

Furthermore, in order for the District to attain the federal $PM_{2.5}$ standard by 2014, additional mobile source reductions beyond California Air Resources Board's (CARB) mobile source control strategy are necessary as CARB's currently proposed State Strategy will not attain the $PM_{2.5}$ standard until 2020. Hence, three Policy Options to the Draft Final AQMP have been developed to incorporate additional mobile source control strategies.

CEQA ALTERNATIVE 2—VOC/NOX COMBINED ALTERNATIVE

CEQA Alternative 2 recreates the traditional AQMP reductions strategy for attainment where VOC and NOx emissions are reduced in approximately equal combinations to ensure both ozone and particulate matter concentrations are lowered. This alternative contains all of the same short- and long-term control measures as the Draft Final Plan, but differs in the composition of the black box long-term control measure. Compared to the NOx black box for mobile sources in the Draft Final Plan, CEQA Alternative 2 has more VOC and less NOx reductions from stationary and mobile sources.

POLICY OPTIONS

The Draft Final 2007 AQMP identifies the following three Policy Options to the proposed Plan:

Policy Option 1

Policy Option 1 is the same as the Draft Final 2007 AQMP and consists of the District's proposed additional short-term control measures to complement CARB's mobile source control strategy to reach attainment of the $PM_{2.5}$ standard by 2014 and the ozone standard by 2023.

Policy Option 2

Policy Option 2 is to have the state fulfill its NOx emission reduction obligations under the 2003 AQMP by 2010. Additionally, the state could choose to implement some of the proposed control measures in Policy Option 1, or substitute other control measures that the state identifies as part of the SIP public process to meet its 2010 obligation. The state would also need to identify additional NOx emission reductions to meet its emission target by 2014 which could again consist of control measures previously identified by the state, control measures in Policy Option 1, or the substitution of other control measures.

For the Draft Socioeconomic Report herein, Policy Option 2 accelerates the implementation dates of the most cost-effective mobile source measures under Policy Option 1. Implementation of these measures would be moved up to 2009-2010 from 2011-2014 in order to achieve NOx emission reductions of 124 tons by the year 2010 from these measures. The affected measures are shown in Table 7-1. The remaining short- and long-term measures are the same between Policy Option 2 and the Draft Final Plan.

TABLE 7-1
Measures with Accelerated Implementation Dates in Policy Option 2

Measure No.	Measure Name
ARB-OFFRD-4	Cleaner in-use Off-road Vehicles [NOx, VOC, PM]
ARB-OFFRD-5	New Emission Standards for Recreational Boats [NOx, VOC]
MOB-5	AB 923 Light-duty High-emitter Identification Program [NOx, VOC]
MOB-6	AB 923 Medium-duty High-emitter Identification Program [NOx, VOC]
SCOFFRD-6	Accelerated Turnover and Catalyst Based Standards for Pleasure Crafts [NOx, VOC, PM]
SCFUEL-1	Further Emission Reduction from Gasoline Fuels [NOx, SOx]

Policy Option 3

Policy Option 3 is similar to Policy Option 1 but relies heavily on public funding assistance to achieve the necessary NOx reductions through accelerated fleet turnover to post-2010 on-road emission standards or the cleanest off-road engine standards either currently in effect or after 2010. This includes funding for the replacement of on-road heavy-duty vehicles, off-road mobile equipment, pleasure craft, and off-road vehicles. Approximately $600 million will be needed per year from 2009 to 2014.

For the Draft Socioeconomic Report herein, it is assumed that the implementation of all the District proposed short-term mobile source measures would be funded via yet-to-be-identified public funds which could be increases in sales tax, gasoline tax, and/or user fees.

COMPARISON OF SOCIOECONOMIC IMPACTS

Table 7-2 compares the direct costs, direct air quality benefits, and job impacts of Policy Options 2 and 3 and the VOC/NOx Combined Alternative to the Draft Final 2007 AQMP. The monetary cost and benefit analysis includes both quantified and unquantified measures and quantified benefits. Since the Draft Socioeconomic Report is performed on an annual basis, no job analysis can be performed for the unquantified control measures. The quantified measures represent only 47 percent of the intended emission reductions for clean air. Therefore, the job analysis for the cost of control measures in Table 7-2 represents the job impacts from implementing only 47 percent of the emission reductions. The clean air benefit in Table 7-2, on the other hand, depicts the air quality benefit of all the intended emission reductions for attainment. Therefore, its associated job impact includes the air quality benefit of all the emission reductions.

TABLE 7-2

Average Annual Impacts of AQMP Policy Options and CEQA Alternatives

	Costs		Quantified Benefits	
Alternatives	Millions of 2000 Dollars	Jobs*	Millions of 2000 Dollars	Jobs
Draft Final 2007 AQMP	$2,348	-28,204	$14,023	61,014
VOC/NOx Combined Alternative	2,468	-28,204	$14,057	60,962
Policy Option 2	2,387	-29,973	$14,023	61,014
Policy Option 3	2,348	-16,782	$14,023	61,014

*Reflect only the impacts of quantifiable measures.

The higher cost under the VOC/NOx Combined Alternative reflects different distribution of emission reductions in the black boxes under this alternative and the Draft Final Plan. Policy Option 2 is more expensive than the Draft Final Plan because of earlier implementation of several control measures in Policy Option 2 than the Draft Final Plan. The black-box is assumed to be the same among the Draft Final 2007 and Policy Options 2 and 3. The cost of Policy Option 3 is the same as the Draft Final 2007 Plan. However, it is assumed that the burden of public funding required to implement the District's portion of mobile source measures under Option 3 would be shared among the California residents as opposed to the Draft Final Plan where the cost of these measures would be borne by respective affected industries. California residents outside of the four-county area were assumed to have a share of $295 million for the implementation of the District proposed short-term mobile source control measures.[1] The job impact of the $295 million on the rest of California residents is not modeled through REMI since the REMI model for the socioeconomic analysis herein covers the four-county area only.

The VOC/NOx Combined Alternative is projected to have higher air quality benefits than the Draft Final 2007 AQMP. There were no separate air quality analyses for Policy Options 2 and 3. It is assumed that both options would achieve the same air quality benefits as the

[1] Based on the ratio of four-county areas' population to California's population.

Draft Final Plan. The VOC/NOx Combined Alternative has the same $PM_{2.5}$ attainment benefit as the Draft Final Plan. Thus, only benefit categories associated with ozone concentrations would show differences between the VOC/NOx Combined Alternative and the Draft Final Plan. For example, the ozone dis-benefit under the Draft Final Plan becomes smaller due to additional air quality improvements under the VOC/NOx Combined Alternative. Table 7-3 shows the distribution of quantified benefits for all the alternatives among different benefit categories.

TABLE 7-3
Average Annual Quantified Benefits by Category by Alternative
(millions of 2000 dollars)

CEQA Alternatives	Total	Health	Visibility	Congestion Relief	Material	Crop Yield
Draft Final 2007 AQMP	$14,023	$9,204	$3,631	$966	$204.2	$18.4
VOC/NOx CombinedAlternative	$14,057	$9,238	$3,631	$966	$204.0	$18.0
Policy Option 2	$14,023	$9,204	$3,631	$966	$204.2	$18.4
Policy Option 3	$14,023	$9,204	$3,631	$966	$204.2	$18.4

In terms of costs, the District's residents would have smallest burden under Policy Option 3. The VOC/NOx Combined Alternative is the most expensive among all the CEQA Alternatives.

Both the Draft Final AQMP and the VOC/NOx Combined Alternative are demonstrated to meet the federal air quality standards for ozone and $PM_{2.5}$. Although the VOC/NOx Combined Alternative has higher air quality benefits than all other alternatives, it has the highest implementation cost.

SUMMARY

The Draft Socioeconomic Report can affect the selection of alternatives to the proposed Plan as identified in the Environmental Assessment for the Draft Final 2007 AQMP. In considering whether to adopt the Draft Final Plan or one of the alternatives, the District Governing Board will select the alternative that presents the best balance of greatest socioeconomic and environmental benefits and least adverse environmental and socioeconomic impacts.

The No Project Alternative, which is the 2003 AQMP, would not reach attainment of air quality standards. Both the Draft Final 2007 AQMP and CEQA Alternative 2—VOC/NOx Combined Alternative—are demonstrated to meet the federal air quality standards for ozone and $PM_{2.5}$.[2] The VOC/NOx Combined Alternative has the highest cost and the highest air

[2]This Alternative has the same short-term measures as the Draft Final 2007 AQMP but has more VOC and less NOx reductions for the "black-box" commitment; it also attains the 8-hour ozone standard by 2023. Since Alternative 2

quality benefit. The Draft Final Plan and the Draft Socioeconomic Report also analyze two policy options, as described in Chapter 7 of the Proposed Modifications to the Draft Final 2007 AQMP. Policy Option 2 accelerates the implementation dates of some mobile source measures to meet CARB's commitment under the 2003 AQMP, and has higher costs than the Draft Final 2007 AQMP. However, it should be noted that higher costs due to accelerated control implementation are a result of delayed fulfillment of the 2003 Plan commitment by CARB. Policy Option 3 is similar to Policy Option 1 but relies heavily on public funding assistance to achieve the necessary NOx reductions through accelerated fleet turnover. Both Policy Options 2 and 3 are assumed to achieve the same air quality benefit as the Draft Final Plan.

Significant NOx reductions are necessary, and more effective than VOC reductions to attain the $PM_{2.5}$ standard in 2014. To attain the ozone standard, building upon the $PM_{2.5}$ strategy, further NOx reductions are still needed even with substantial VOC reductions. The NOx-heavy strategy in this Plan was chosen to meet both standards, and provides greater certainty to reach attainment due to less total reductions (VOC and NOx) required. Downwind areas also benefit more from this strategy. Moreover, VOC controls at this time are less advanced than NOx controls.

Quantified air quality benefits of the Draft Final 2007 AQMP and the VOC/NOx Combined Alternative are projected to foster continued growth of the local economy. Policy Option 3 has the lowest projected jobs forgone from quantified measures, since the burden of the cost from the District's mobile source measures was shifted from industries to California residents and the share borne by residents outside of the District was not included in the job analysis. It was assumed that the implementation of the District's mobile source measures would be funded via yet-to-be-identified public funds which could be increases in sales tax, gasoline tax, and/or user fees. Early implementation of several control measures under Policy Option 2 would bring not only higher costs but higher jobs forgone. Overall, the Draft Final Plan results in the lowest implementation cost and highest number of jobs gained from clean air.

has more VOC reductions, it is assumed that more concurrent toxic reductions would occur than the Draft Final 2007 AQMP.